

claimed subject matter relative to the Best reference is the presence of the stoichiometric excess of ammonia and what it accomplishes.

In view of the above it is felt that it is appropriate to identify the significance of the respective comparative examples in Best and the comparative examples of the instant invention relative to the significance of the examples in the instant disclosure. More specifically, the comparative example in the Best reference establishes factually that the pressure emulsification process using ammonium hydroxide to neutralize up to 100% of the acid in E/AA(20%AA) copolymer does not result in a highly dispersed aqueous emulsion. This is consistent with the teaching found at the bottom of page 2 of the Best reference as follows: "It is an object of this invention to avoid the use of pressure emulsification process ...". Similarly, the comparative examples in the instant invention establish factually the same is true of E/MAA(20%MAA) copolymer again using ammonium hydroxide to neutralize up to 100% of the acid. In contrast, the examples of the instant invention clearly establish that for the E/MAA(20%MAA) copolymer the use of pressure emulsification in combination with an excess of ammonium hydroxide (i.e., 130% of stoichiometry) does factually produce a highly dispersed aqueous emulsion.

In view of the above analysis of the respective examples in the Best and instant specification, not only does the claimed E/MAA copolymer dispersions differ from the Best reference in terms of the presence of excess ammonia but the process Claims 11 and 12 are taught in Best to be inoperative. As such no *prima facie* showing of obviousness Claims 11 and 12 can be made based on the teachings of Best. As such, at least the §103 rejection of Claims 11 and 12 using Best as the primary reference must be withdrawn and such action is requested.

The Office Action proceeds to assert that the Nothnagal reference shows the use of excess ammonia to give more stable polyacrylate dispersion and identifies column 10, lines 62 to column 11, line 7 as supporting this position. The Examiner then concludes that this stability would have been expected in the dispersions of Best for reasons which the ordinary skilled artisan would

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understand based on the teachings of Nothnagal. In direct contrast to this assertion and conclusion, Nothnagal at column 7, line 45 and following defines "Acrylic polymer" structurally as a pure polyacrylate acid copolymer with no ethylene comonomer. Clearly applicant and the Best primary reference deal exclusively with polyethylene acid copolymer. Such polymers are recognized in the art as more "polyethylene" like than "polyacrylate" like. Consequently, one skilled in the art would not expect the two polymer systems to have similar aqueous dispersion behavior. One type system would not be predictive of the other. Directly to this issue, column 10, lines 43-46 of the Nothnagal reference states the following: "To permit water dispersibility and neutralization to a salt, the acrylic polymer should have an acid value in the range of from about 15 to about 100 and preferably not more than 75". This acid value range is clearly a significant aspect defining the Nothnagal invention in that all claims of the Nothnagal patent recite this limitation. In contrast to this numerical range taught and claimed by Nothnagal as effective for the "acrylic polymer" of his invention, the 20% acid present in the examples of both E/AA copolymer of Best and the E/MAA copolymer of the instant invention correspond to acid values of 155 and 130, respectively (i.e., using the number of milligrams of KOH necessary to neutralize one gram of polymer as the definition of acid value). In other words, the literal teaching found in the Nothnagal reference is not relevant to a polyethylene type copolymer and one skilled in the art would readily recognize this. This is true not only in regards to predicting the existence or non-existence of an aqueous dispersion but also true relative to how to make an aqueous dispersion. In this regard it should be noted that the Nothnagal reference does not teach the autoclave type process for producing an aqueous dispersion and the acid value range goes down numerically to 15, which compositionally is approaching essentially polyethylene (*per se*) a non-aqueous compatible polymer. In view of these differences there is a clear basis to distinguish the subject matter sought to be patented from the combination of references. As such, it is felt that there is a basis for withdrawal of the §103 rejection and such action is requested.

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At present, Claims 5-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Reconsideration of this final rejection is requested.

As amended claims 5 and 6 no longer contain the word "preferably" and the respective narrowing feature is now affirmatively set out. As such it is felt that there is a clear basis for the withdrawal of the §112 rejection and such action is requested.

In view of the above amendments and brief remarks it is felt that all claims are now in condition for allowance and such action is requested. Should the Examiner believe that an interview or other action in Applicant's behalf would expedite prosecution of the application, the Examiner is urged to contact Applicant's attorney by telephone at (302) 992-6824.

Respectfully submitted,



Robert B. Stevenson  
Attorney for Applicant  
Registration No. 26,039  
Telephone: 302-992-6824  
Facsimile: 302-992-3257

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**Version with markings to show changes made**

In showing the changes, deleted material is shown bracketed.

**In the claims:**

5. (Amended) The aqueous dispersion of claim 1 wherein the ethylene-methacrylic acid copolymer comprises 5-50 wt% of the dispersion and [preferably] has a melt flow rate of 50-2000 grams/10 minutes at 190°C/2160 gram load.

6. (Amended) The aqueous dispersion of claim 3 wherein the ethylene-methacrylic acid copolymer comprises 5-50 wt% of the dispersion and [preferably] has a melt flow rate of 50-2000 grams/10 minutes at 190°C/2160 gram load.